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No. 25 JUNE 20th, 1959 Vol. 71

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Field Trials of Diethylcarbamazine* Against Lungworms in Cattle

BY

W. H. PARKER, H. E. ROBERTS, T. F. VALLELY,

AND

F. T. BROWN

Veterinary Investigation Centre, Wolverhampton

SUMMARY.—Three controlled field trials of diethylcarbamazine against husk are reported.

The main criteria of effect were weight progress, faecal larval output, and clinical appearance.

Significant weight-gain responses were obtained in two outbreaks, in one accompanied by marked clinical improvement and depression of faecal larvae. The latter was the only effect in the third outbreak which was more chronic and seriously complicated by "virus pneumonia."

The results support the promise held out by previous laboratory experiments that diethylcarbamazine might prove to be a valuable drug for treatment of parasitic bronchitis.

DIETHYLCARBAMAZINE was developed after the Second World War as an effective remedy for certain forms of human filariasis (review, Hawking, 1955). The drug has also been used successfully in man against ascarids and in the veterinary field is now well-known as an anthelmintic for related intestinal roundworms of dogs and cats. After promising results had been obtained in a field outbreak of parasitic bronchitis in 1953 (Rep. An. Health Services, G.B., 1955; Parker, 1957) experimental investigation (Parker, 1957; Parker & Roberts, 1958) demonstrated that the drug given orally or by injection could be very effective against early husk, leading to a rapid fall in respiration rate, return of appetite, resumption of normal weight-gain, and virtual suppression of faecal larvae even with infestation sufficiently severe to kill control calves. That these effects were due to worm elimination was shown in a later experiment (Roberts & Parker, 1957) where lung examinations were made one week after the commencement of treatment. When treatment commenced at 14 days after larval infection the parasitic burden was almost extinguished, and when commenced at 21 days was reduced by at least 50 per cent.

Though not the germ of this work, an editorial comment in THE VETERINARY RECORD (1950) suggesting that hetrazan (=diethylcarbamazine) might prove effective against husk, has proved prophetic. Ozerskaya (1953) in Russia was apparently already experimenting with this compound in sheep before this work commenced but he was concerned not so much with Dictyocaulus as with Muellerius, a worm considered of little importance in this country (Lapage, 1956). To pursue the possible wider application of diethylcarbamazine to this important disease of cattle, suitable field outbreaks were sought for trials, 3 of which are reported in the present paper.

Methods

Experiments were limited to animals spending their first season at grass to reduce complications arising from a partial immunity. It was also considered desirable until the third experiment described, to confine our interest to early treatment. Apart from larval counts in faeces, weight measurements, for which a Gascoigne portable weigh-crush was available, appeared to offer the simplest method of evaluating treatment since depression of appetite and growth are characteristic of infestation. Respiratory counts, though valuable in artificially infested stock are not practicable in field trials. The

* Franocide (Burroughs Wellcome).

cattle used in these experiments were all in the age range of 9 to 14 months.

The general plan was to weigh and take faeces samples from the whole of the experimental group on the first day and to start treatment of half of the animals, selected at random, leaving the other half as controls. Treatment consisted of the intramuscular injection of a 10 or 12 per cent. solution of diethylcarbamazine citrate in doses accurately calculated from the individual weights at the rate of 10 mg. per lb. Injections were repeated on the second and third days. Weighing and faeces sampling took place on the first and fifteenth day of all trials and on approximately the twenty-ninth day also in the first and second trials. The faeces samples were examined for larvae both by the 1-gramme McMaster and the more delicate Parfitt (1955) 10-gramme method.

Histories

Experiment 1

Thirty-three Ayrshire yearling heifers were turned out for the first time in the middle of May and run with older cattle. At the beginning of June they were transferred to a field which had carried only horses in the preceding 2 years. Typical symptoms of husk were noticed about a month later and the experiment was started on July 10th, the animals being kept on the same pasture throughout and receiving no supplementary food.

Experiment 2

Thirty-one Ayrshire yearling heifers were put out for the first time at the beginning of May on a pasture used exclusively for calves and unoccupied during the winter. In early June they were moved to a field just vacated by a number of 18-month-old heifers. Severe symptoms became apparent in the last week of July and caused such concern that the animals were brought into a covered yard permanently and fed liberally with concentrates and hay. One beast died on August 1st, the day the experiment was started, and revealed very large numbers of Dictyocaulus in the lungs with typical consolidation and emphysema.

Experiment 3

Large-scale calf-rearing was started as a new venture in October, 1957. The method was intensive, Friesian-cross calves being multiple-suckled for 6 to 8 weeks. Commencing at this age and throughout the winter, pneumonia had been a severe problem in the closely-housed calves and had necessitated extensive treatments.

Sixty animals were turned out in mid-May together with 5 bought calves and 10 of the smallest calves of the previous older batch which had been turned out a month earlier and were already coughing. They were placed on a field recently occupied by cows and were brought into covered yards each evening. Coughing was first noticed in the main group at the beginning of August and phenothiazine treatment was given. By mid-August coughing had become more severe and general and on August 18th, 19th, and 20th, the whole group were dosed orally with cyanacethydrazide. From this time the smaller calves were housed permanently. There was no obvious response to treatment and after 12 animals had already died, further advice was sought. The experiment commenced on September 18th.

Results

The weights and larval figures have been tested statistically by Mr. P. A. Young of the Wellcome Foundation, in the form of double dichotomies and all statistical claims below are based on his analyses. The dichotomies are shown in the tables.

Experiment 1 (Table I)

While there was no definite clinical difference between the groups, the treated one gained more weight in the fortnight after dosing, these differences being significant at the 1 per cent. level. Over the next 14 days there were no such significant contrasts but the weight advantage of the treated animals was retained. Larval output was so low that comparisons could not be made.

Experiment 2 (Table II)

As early as the seventh day of the experiment there was an obvious easing of respiratory distress and general improvement in the treated animals compared with the controls which tended to worsen. The weight-gain contrast between the groups in the first 2 weeks was considerable and significant at the 0.1 per cent. level. As in the first experiment there was no significant difference in the second fortnight but the weight advantage of the treated group was maintained. One untreated heifer died on the fifteenth day and the lungs were very severely affected with parasitic bronchitis, large numbers of adult worms being present. Four days later, on the nineteenth day, 2 treated animals were slaughtered for comparison and a total of only 9 worms was recovered from the lungs. Larval production was not high but had fallen considerably by the fifteenth day in the treated heifers while the counts in the controls had risen over the same period, resulting

TABLE I. EXPERIMENT NO. 1
WEIGHT RECORDS IN LBS.

Group	Number of animals	July 10th, 1958		July 24th, 1958		August 8th, 1958
		Range	Average	Average gain 14 days	Number gains over 10 lbs.	Average gain 15 days
Treated	17	399–560	443	20	13	24
Controls	16	407–575	456	2	3	25

TABLE II. EXPERIMENT NO. 2
WEIGHTS AND LARVAL COUNTS
THOSE ANIMALS ONLY ARE INCLUDED WHERE WEIGHTS AND LARVAL COUNTS WERE RESPECTIVELY AVAILABLE ON EVERY OCCASION

Group	Number of animals	Weights (lbs.)					Laval counts per gramme of faeces					
		August 1st, 1958		August 15th Gain in 14 days		August 29th	August 1st, 1958			August 15th, 1958		
		Range	Average	Average	Number gains over 35 lbs.	Average gain 14 days	+ ve samples	Range	Average	+ ve samples	Range	Average
Treated	15	378–649	482	51	14	29	8/14	0–13·4	1·3	2/15	0–0·1	0·0
Control	14	332–581	439	22	2	27	11/14	0–39·6	6·1	12/13	0–200	35·9

in a difference which is significant at 0.1 per cent.

Experiment 3 (Table III)

No clinical or significant weight contrast was found between the two groups. Three of the treated group died, one on the second day yielding 1,400 worms, one on the sixth day yielding 800, and one on the eleventh yielding 26. In each case there was extensive anterior consolidation of the lungs typical of so-called "virus pneumonia." Larval production was quite high and at 15 days the level was significantly ($P < 0.001$) depressed in treated animals compared with controls.

Discussion

From the economic point of view successful treatment of husk must not only prevent mortality but also combat wasting and promote resumption of normal growth. These ends are furthered by reduction or elimination of the parasitic burden, but the degree of success attainable in any given outbreak is related to the extent of the lung lesions. Factors recognised as influencing severity of the disease include the rate, size, and continuity of the larval invasion, the maturity and duration of the worm infestation, specific and non-specific host resistance, and the presence and type of any intercurrent infection. In laboratory experiments many of these factors can be regulated but attempted translation of laboratory results to field conditions, where the epidemiology is as yet imperfectly understood would be speculative. Moreover any opinion of a drug based on field observations without comparable controls would be questionable.

Since no two outbreaks are identical it might be instructive to try to relate the conditions to the treatment responses. On farm 1 the stock had been exposed to light infection from early May, a month prior to symptoms, and it seems that the critical infestation was self-derived from the new pasture (Michel, 1957). On the second farm the first real contact with larvae was delayed until the stock were placed on a field already grazed by animals which had had only one previous grazing season, the class of cattle most likely to contaminate a pasture (Cunningham, Jarrett, McIntyre, & Urquhart, 1956). In both cases the relevant infestation was therefore comparatively recent with severity determined in part at least by the different pattern of larval uptake. The more serious disease on farm 2 afforded greater scope for the drug to exert beneficial effect. Superior over-all weight gain on this farm could be related to the supplementary feeding.

On farm 3 the history indicated that the disease was chronic compared with outbreaks 1 and 2. Moreover, it was seriously complicated by the presence of extensive so-called "virus pneumonia" which is recognised as an important disease of housed young stock and also as an exacerbating factor in parasitic bronchitis (Jarrett, McIntyre, & Urquhart, 1953). That treatment did in fact exert an anthelmintic effect was confirmed by the significant drop in larval output. However, in the face of the additional "virus pneumonia" contribution to the chronic lung damage, this was insufficient to allow any appreciable benefit.

(*Continued at foot of col. 2, page* 513)

TABLE III. EXPERIMENT NO. 3
WEIGHTS AND LARVAL COUNTS
THOSE ANIMALS ONLY ARE INCLUDED WHERE WEIGHTS AND LARVAL COUNTS WERE RESPECTIVELY AVAILABLE ON BOTH OCCASIONS

Group	Number of animals	Weights (lbs.)			Larval counts per gramme of faeces					
		September 18th 1958		October 2nd	September 18th, 1958			October 2nd, 1958		
		Range	Average	Average gain 14 days	+ ve samples	Range	Average	+ ve samples	Range	Average
Treated	28	359–551	441	46	26/28	0–397	42	5/28	0–74	5
Control	30	344–569	440	38	22/25	0–409	58	19/25	0–1276	71

A Paper Strip Test for Proteinuria in the Dog

BY

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AND

J. S. WILKINSON

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Royal Veterinary College, London

SUMMARY.—The paper strip test for proteinuria is generally satisfactory as a rapid qualitative test in the dog. It does not supersede the accepted tests.

Introduction

RECENTLY a paper strip test for proteinuria has become available commercially under the trade name " Albustix " reagent strips*. This product has been used in the examination of human urine, and found to be satisfactory when compared with the standard sulphosalicyclic acid test (Carne, 1958; Baron & Newman, 1958; Frazer, 1958; Macgregor, 1958). Rees Evans and Campbell (1958) mention that they are examining this test and that so far they have found it satisfactory in animal urine. It was felt that the use of this product as an aid to veterinary diagnosis should be investigated further, particularly in the examination of dog urine.

Description of Test

Albustix reagent strips are stiff paper strips measuring 5.9 cm. x 0.5 cm. One end of the strip is impregnated with tetrabromphenol blue and buffered to approximately *p*H3 with a citrate buffer. The impregnated end of a strip is dipped into the urine and withdrawn. If protein is present a colour change takes place from yellow through green to blue. This colour change is due to the protein error of indicators (Feigl, 1956). The manufacturers provide a 5-colour scale for comparison.

Methods

Experimental Evaluation : (a) Dog serum containing 5.5 g. protein per 100 ml., was added to dog urine free from abnormal constituents to produce different degrees of artificial proteinuria. The resulting "urine" specimens were tested with Albustix and sulphosalicylic acid.

(b) The *p*H of dog urine free from abnormal constituents was altered with and without the addition of serum. The resulting " urine " specimens were examined with Albustix and sulphosalicylic acid.

Clinical Evaluation : Albustix were used in addition to the usual sulphosalicylic acid test in the routine analysis of dog urine. The end of the strip was dipped into the specimen and removed immediately. The colour which developed was at once compared with the manufacturer's colour scale and recorded as a negative (−), trace (±), moderate (+ or ++) or strong (+++) positive for protein. The manufacturers suggest that their colour scale compares approximately with 0, 30, 100, 300, and over 1,000 mg. protein per 100 ml. in human urine. In one series of specimens the amount of protein was estimated using the sulphosalicylic acid method described by Hawk, Oser, and Summerson (1947).

* Ames Company (London) Limited.

Results

Experimental Evaluation : The results of the examination of artificial urine are shown in Tables I and II. Table I shows that the manufacturer's colour scale, which is only claimed to be approximate, is in fact only very approximate. Table II shows that if the alkalinity of the artificial " urine " is sufficient to overcome the buffering power of the Albustix, false results can be obtained.

TABLE I
ARTIFICIAL URINE. NORMAL *p*H, *i.e.* 6·0 TO 7·0

Protein mg. per 100 ml.	Sulphosalicylic acid	Albustix	Albustix: Approximate protein mg. per 100 ml.
0	−	−	0
20	+	+	100
250	+	+	100
350	++	++	300
500	++	++	300
700	++	++	300
900	++	++	300
2,750	+++	+++	>1,000

TABLE II
ARTIFICIAL URINE. INFLUENCE OF *p*H

*p*H (B.D.H. narrow range indicator paper)	Protein mg. per 100 ml.	Sulphosalicylic acid	Albustix	Albustix: Approximate protein mg. per 100 ml.
5·5	0	−	−	0
5·5	20	±	±	30
6·1	0	−	−	0
6·4	20	+	+	100
7·3	0	−	±	30
7·3	20	±	++	300

Clinical Evaluation : Ninety-four specimens were examined; the results in 92 cases are shown in Table III. The remaining 2 specimens contained blood sufficient to obscure any colour change of the Albustix. These results show that the test compares reasonably with the standard sulphosalicylic acid test. If the *p*H of the specimen is high, as may

occur in cystitis, or if it contains bilirubin, the results of the sulphosalicylic acid test and Albustix may not agree. On the other hand the presence of glucose or ketones does not appear to interfere with the test.

The quantitative results are shown in Table IV.

TABLE III
CLINICAL EVALUATION (QUALITATIVE)

Number of specimens	Sulphosalicylic acid	Albustix				
		−	±	+	++	+++
39	−	21	16	2*†		
12	±	1	10		1*	
16	+		4	8	3	1
9	++	1†		3	2	3**
16	+++ or more		3	2	2	7
Total 92						

* High *p*H. † Bilirubin present.

TABLE IV
CLINICAL EVALUATION (QUANTITATIVE)

Number of specimens	Quantitative sulphosalicylic acid mg. per 100 ml.	Albustix approximately mg. per 100 ml.
7	0	0, 0, 0, 0, 0, 0, 100
2	<10	0, 0
3	10	0, 30, 100
1	30	1,000
1	35	100
3	40	30, 50, 100
2	70	100, 200
1	80	0
2	100	30, 200
1	250	1,000
1	300	1,000
1	400	100
3	500	20, 200, 1,000
2	1,000	1,000, 1,000
1	>1,000	80
Total 31		

Storage

This product has been stored in the manufacturer's containers under normal laboratory conditions, both on the bench and in a cupboard for 3 months without any deterioration.

Discussion

The results of the simple experimental procedures are straightforward, and need not be elaborated.

The results of the clinical use of Albustix may be enlarged upon. Table III shows that in the majority of cases there is satisfactory agreement between the 2 tests. In those samples where there was a marked variation in the results, only 2 gave lower values with Albustix than with sulphosalicylic acid. One of these results was in the trace category with sulphosalicylic acid and may have been due to "observer error." The other case occurred with a specimen containing a high concentration of bilirubin giving a yellow colour which probably obscured any colour change due to the presence of protein. A false positive was obtained in a second case of bilirubinuria. Two other cases, containing lower concentrations of bilirubin, gave satisfactory results.

The colour change given by Albustix, in the presence of a low level of protein, from yellow to a yellowish green is not easy to distinguish. It has been suggested that the non-impregnated end of the reagent strip should also be dipped in the urine and used as a control. This is probably a wise precaution with highly coloured urines.

Decomposition of urea which may occur in cystitis, or when there is delay in the examination of a specimen, will cause a marked rise in *p*H figures as high as 9.1 occurring in cystitis. This change is sufficient to overcome the buffer incorporated in the reagent strip and will lead to false positive results. However, since protein is a frequent, but not inevitable, concomitant of cystitis this is probably of minor significance. Only one false positive was obtained in the clinical series. The manufacturer states that the test is unreliable in stale samples.

Macroscopic blood will obscure any colour change in the Albustix, but this is of no significance as proteinuria must inevitably accompany haematuria.

Conclusions

Albustix reagent strips are generally satisfactory as a rapid qualitative test for proteinuria in the dog. They might well be employed as a simple screening test. As this test is liable to errors it does not replace the standard sulphosalicylic acid test.

Acknowledgments.—The authors wish to thank Messrs. Ames Company (London) Ltd., for the supply of "Albustix" reagent strips.

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(*Concluded at foot of col.* 1 *overleaf*)

Field Trials of Diethylcarbamazine—*Concluded.*

Acknowledgments.—Our thanks are extended to Mr. P. A. Young for statistical analysis of results, and to those of the technical staff of the Veterinary Investigation Laboratory who carried out the tedious work involved in worm and larval counts. We are indebted to Messrs. Burroughs Wellcome for the supplies of diethylcarbamazine.

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Arterial Puncture in Horses

BY

E. W. FISHER

University of Glasgow Veterinary School

A METHOD for obtaining arterial blood samples from cattle by direct puncture of the brachial artery was described some time ago (Fisher, 1956). This method has been in use since that date to obtain arterial blood samples for blood gas analysis and more recently for obtaining the serial arterial blood samples required for the determination of the cardiac output by the dye dilution technique (Fisher & Dalton, 1959).

It has been found possible to obtain arterial blood from horses by puncture at the same site.

A pulse can often be felt at the root of the neck of the horse but the brachial artery cannot be located with the same precision as in thin cattle.

The hair over the area where the pulse can be felt is clipped and the skin is swabbed with trimethyl alkyl ammonium bromides*. The subcutaneous tissue at this point is infiltrated with about 10 ml. of a 5 per cent. solution of procaine hydrochloride using a 2 in. 19-gauge needle so that the deeper tissues are included. If, as in some heavy horses, the pulse cannot be felt at this point the area infiltrated can be defined as one handsbreadth in from the point of the shoulder and one handsbreadth above the point of the shoulders. The photographs below illustrate finding the site and the actual puncture.

After waiting a few minutes for the procaine hydrochloride to take effect, a sterile 8 in. 14 or 15 B.W.G. needle with an especially sharpened point is inserted into the horse either at the point where the pulse can be felt or at the point defined above, in a direction parallel to the long axis of the animal and at about 5° to the horizontal. The needle is inserted slowly to a depth of some 4 to 7 in. when arterial blood is observed to flow from the needle. In a few animals a pulsation is felt when the needle first makes contact with the arterial wall but in the majority of cases this pulsation cannot be detected.

Arterial blood samples have been obtained by this technique on about 30 occasions from some 20 horses.

This method of obtaining arterial blood samples enables such samples to be removed from any equine subject and eliminates the necessity of previous surgical intervention in the construction of exteriorised arteries (Van Leersum, 1911). It is a simpler approach than the techniques utilised by Swedish workers who obtain arterial blood from cattle by

(*Continued at foot of adjoining column*)

FIG. 1.

FIG. 2.

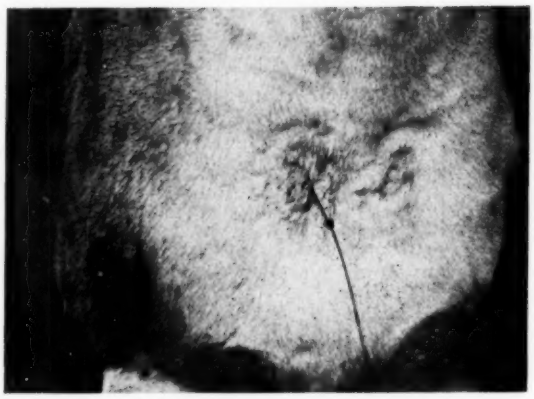

FIG. 3.

* Cetavlon: Imperial Chemical (Pharmaceuticals) Ltd.

A Paper Strip Test, etc.—*Concluded.*

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The Victoria Veterinary Benevolent Fund

A meeting of the Council of the Victoria Veterinary Benevolent Fund was held at 10 Red Lion Square, on April 16th, 1959, when the following members were present :—

Mr. H. W. Dawes (President) in the chair, Messrs. E. P. Barrett, H. E. Bywater, Professor T. J. Bosworth, Mr. E. Clark, Major J. J. Dunlop, Mrs. D. I. Glover, Mr. A. A. Lamont, Professor J. McCunn, Mr. J. N. Ritchie, (Mrs. Erica I. Thomson), Miss V. Tillemont-Thomason, Capt. Wm. Watt and Major W. H. Wortley.

In attendance : Mr. R. V. Thatcher, Solicitor, and Mr. C. W. Francis, Secretary.

Minutes

The Minutes of the previous meeting held on January 30th, 1959, having been published in THE VETERINARY RECORD, were taken as read and signed as correct.

Apologies for Absence.

The secretary reported apologies for absence from Messrs. G. Atkinson, G. F. Brown, R. C. U. Fisher, J. A. Flynn, Professor C. Formston, Mr. G. N. Gould, Dr. R. E. Glover, Mr. L. E. Hughes, Professor A. Messervy, Capt. T. M. Mitchell, Mr. G. M. G. Oliver, Professors L. P. Pugh, W. L. Weipers, and Capt. A. Whicher.

Correspondence

The secretary submitted the following correspondence :—

(*a*) Letter from Mr. J. A. Flynn, M.R.C.V.S., honorary treasurer, Veterinary Medical Association of Ireland, dated February 11th, 1959, enclosing his Association's cheque for £370 1s. 2d., of which £10 10s., represented a life membership fee from Mr. J. J. McCormack, M.R.C.V.S.

It was unanimously resolved—That it be recorded in the Minutes that the Council are very grateful for this handsome contribution, and appreciate the generous support it receives from the Veterinary Medical Association of Ireland.

(*b*) Letter dated February 24th, 1959, from Messrs. Sedgwick, Turner, Sworder & Wilson, Solicitors, enclosing cheque for £50 bequeathed to the Fund by the late Mr. F. T. Trewin, Watford.

(*c*) A letter from the Professional Classes Aid Council dated April 9th, 1959, asking if the Fund would nominate a representative on their Council for the ensuing 3 years, as Mr. H. W. Dawes's period of service ends this summer.

As the President felt the Council should be represented by another member, he proposed that Professor J. McCunn be nominated, and this was carried unanimously.

(*d*) *James Harrison Bequest.* A letter dated March 26th, 1959, from Messrs. Tomkin & Bowes, Solicitors, intimating that they had now completed the sale of "Oak Cottage," and asking for Council's instructions in regard to the disposal of certain land included in the bequest.

The meeting decided that before coming to a decision in this matter, more specific information regarding the land to be disposed of should be made available to members and the secretary was instructed to write to Messrs. Tomkin & Bowes accordingly.

Hunting Trust

The secretary reported for the information of Council that the surplus in the Hunting Trust as at December 31st, 1958, amounted to £1,085 7s. 9d. and that in accordance with the terms of the Trust, this sum was transferred by the Trustees to the Victoria Veterinary Benevolent Fund on March 17th last.

Investments. (*a*) The treasurer reported that the executive committee, after careful consideration, invested the sum received from the Fredk. Hunting Trust, amounting to £1,085 7s. 9d. in the purchase of £1,223 10s., British Electricity 4¼ per cent. Guar. Stock, 1974–9.

It was resolved—That the action of the executive committee be approved.

(*b*) *Post Office Deposit Account.* The treasurer, having submitted a statement showing the increased yield obtainable by transferring the amount standing in the Post Office Deposit Account to the London Trustee Savings Bank, *it was unanimously resolved* that the Officers be empowered to take immediate steps for the transferance of the balance now standing in the Post Office Deposit Account, to appropriate accounts in the London Trustee Savings Bank.

Accountant's Report

The Secretary read the following report which was approved, a vote of thanks being accorded to the respective donors :—

Since the previous meeting the following Legacy, Life Membership Donation, Special Subscriptions, and Donations have been received :—

Arterial Puncture in Horses—*Concluded.*

puncture of the abdominal aorta *per rectum* and from horses from the facial artery (Hansson & Obel, 1958).

Arterial blood may be obtained from horses in a similar manner to that described by Sellers and Hemingway (1951) for cattle. Blood is obtained from the carotid artery in the middle third of the neck but at this site puncture is more difficult, moreover slight movements of the head and neck are liable to cause withdrawal of the needle from the artery.

References

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	£ s. d.	£ s. d.
Legacy		
Trewin, F. T.		50 0 0
Subscriptions		
Veterinary Medical Association of Ireland	359 11 2	
Western Counties Veterinary Association	10 10 0	
		370 1 2
Donations		
Life Membership—McCormack, J. J. (Eire)	10 10 0	
In Memory of Dr. Tom Hare		
Professor J. McCunn		
Major Hamilton Kirk	2 2 0	
In Memory of Mr. Scott Dunn		
Professor J. McCunn		
Major Hamilton Kirk	2 2 0	
Dunn, George	20 0 0	
Eastern Counties Veterinary Society	15 15 0	
Fielding, Miss (per J. W. Bruford) ...	5 0 0	
Hall-Patch, P. K.	2 2 0	
Honhold, C. D. (Northern Dachshund Club Show)	2 2 0	
North-Eastern Medical Association Dinner Dance	32 13 0	
Northern Ireland Veterinary Association	20 0 0	
Society for the Study of Animal Breeding	10 0 0	
Yorkshire Veterinary Society Dinner Dance	13 5 0	
		135 11 0
Collecting Boxes		
Central Veterinary Society (two meetings)	7 13 6	
Northern Ireland Veterinary Association	25 12 5	
North of Scotland Division	11 10 0	
Sutton, Thonger & Sutton	4 11 2	
Western Counties Veterinary Association	3 15 0	
		53 2 1
		£608 14 3

Life Member.

It was unanimously resolved—that Mr. J. J. McCormack, M.R.C.V.S. be elected a Life Member of the Fund.

Wortley Axe Bequest

The chairman of the Wortley Axe sub-committee submitted the following progress report :—

At a meeting of the sub-committee held earlier to-day, two letters from the Charity Commissioners dated February 19th and March 3rd, 1959 (copies of which were circulated to members of Council), were discussed.

Your committee regretted that the Commissioners had not been successful in their negotiations with the Foundation referred to in their letter of January 1st, 1959.

As regards the Commissioners' proposal that the Trust might be interested in the Church Army project for aged people, your committee recommend that the Charity Commissioners be informed that the proposed scheme is one which does not interest the Trustees.

National Association of Almshouses

(*a*) As it would appear the Trustees could not anticipate further help from the Charity Commissioners in their efforts to obtain a suitable building plot, the secretary, on the instructions of the President, wrote to Mr. L. A. Hackett, General Secretary, of the National Association of Almshouses and in his reply of March 26th, 1959, Mr. Hackett submitted particulars of three possible sites. Your committee, however, were only impressed with one of these, namely, the surplus land at Winkton (on the Salisbury-Bournemouth Road) owned by the Mary Elizabeth Dacombe Home of Rest Trust, and it was agreed that the President and the secretary should arrange to meet the Trustees and at the same time inspect the site. Such visitation, however, to be dependent upon the nature of the report(s) to be received following a visit by the local practitioners, to whom the secretary has been instructed to write.

(*b*) Your committee also decided that it would be to the advantage of the Fund to become a member of the Association, and recommends accordingly. The subscription would be £2 2s. per annum.

It was resolved that the report be received and adopted.

Cases

The following cases were submitted for review:—

No. 245. Widow, aged 75. Income £5 per annum. Grant £2 10s. per week.

No. 292. Widow, aged 80. In poor health. Receiving small income from lettings. Grant 30s. per week.

No. 299. Widow, aged 63. Receiving N.I. Pension and a little income from lettings. Brother also occasionally helps. Grant £3 per week.

No. 306. Widow, aged 48. Three sons, at School. Income : Widows' and family allowances, and some investment income. Grant £150 per annum.

It was resolved that the grants being made in the above four cases, be continued for a further 12 months.

No. 329. M.R.C.V.S., aged 34, 2 sons, aged 3 and 5. Struck down with acute anterior poliomyelitis in November, 1957. A report on this case having been submitted to the meeting, *it was unanimously resolved* that a special grant of £50 be made to this member.

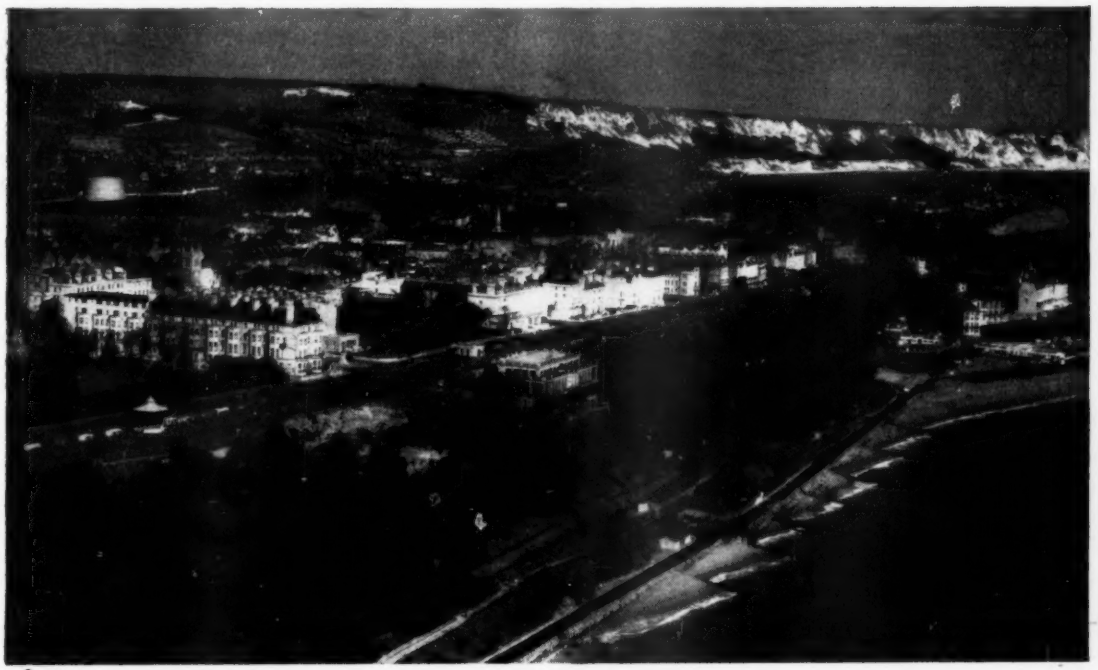
Annual Report

A draft of the Annual Report and Statement of Accounts was submitted and, subject to a few alterations, approved for issue to the members prior to the Annual General Meeting.

Date of Next Meeting

It was resolved that the date of the next meeting be left in the hands of the Executive Committee.

The City of Folkestone



Congress will have a very pleasant setting this year; indeed, among the resorts on the south-east and south coasts one may doubt whether there is a more pleasant place than Folkestone. The front with its carefully attended Leas, the wide promenades, and the pleasant streets leading from them all give a sense of elegance and spaciousness which combines agreeably with the crisp, invigorating air. After a visit Charles Dickens wrote:—

> "You can sit at your open window on the cliff overhanging the sea beach, and have the sky and ocean, as it were, framed before you like a beautiful picture. If, therefore, you want to come out of town and live a life of perfect repose, or see it lived, or to breathe sweet air which will send you to sleep at a moment's notice at any period of the day or night, or to disport yourself upon or in the sea or to scamper upon this part of Kent, or to come out of town for enjoyment of all or any of these pleasures, then come to Folkestone."

From Congress point of view Folkestone is easily reached from many of the southern and south-eastern counties, so that veterinary surgeons who cannot spare the whole week but who are interested in individual papers will not find it difficult to attend just for a day or two.

There are an unusually large number of excellent hotels, and while all kinds of entertainment are available, Folkestone has succeeded in avoiding the disagreeable over-commercialisation which mars so many sea-side towns within reach of London.

It seems that the first clear indication of the town's foundation was in 630 when Eadbald, King of Kent, built an earthen fort, a church, and a nunnery for his daughter who later became Saint Eanswythe. The parish church dates from 1138, and within it there is a brass commemorating Joane Harvey, whose son was the great William Harvey who discovered the principles of the circulation of the blood and who was born in Folkestone in 1578.

The harbour—which in these days is second only to Dover for cross-channel journeys—goes back to the time of Henry VIII who considered and abandoned several plans. It was not, however, until the middle of the 17th century that the harbour proper was begun.

The whole of this part of the coast line, which includes the Cinque Ports, has historical connexions with the Napoleonic era, and it is said that the naval press gangs of the day found among the inhabitants of Folkestone many of their stoutest seamen.

PARASITIC DISEASES OF CATTLE

The revised edition of this B.V.A. handbook is now printed, and copies may be obtained from headquarters, 7, Mansfield Street, Portland Place, W.1. The price to members of the Association, and to veterinary students, is 2s. 6d. per copy, post free. To persons or organisations outside the B.V.A. it is 10s. per copy, post free.

News and Comment

"THE VETERINARY RECORD"

Since the two sides involved in the current printing dispute have found it impossible to reach agreement, production of this, and all other weekly journals, will cease for the time being as from this issue. We can but hope that goodwill and good sense will find a way out of the present impasse as soon as possible.

The importance to the community of the work of veterinary surgeons makes it necessary to try to supply them, so far as the situation allows, with a news bulletin containing, at least, essential information from the Ministry of Agriculture, classified advertisements for locum tenens or other assistance, a diary of meetings, and certain correspondence. We hope, therefore, to issue by post at fortnightly intervals some form of duplicated broadsheet while the printing dispute lasts. As space in the broadsheet will be at a premium we feel sure that those advertising for assistance will be satisfied with *one insertion only* in order that everyone may have his turn. Formal "notices" will be impossible, but the diary of events will serve, at least in part, the same purpose so far as Divisions and other bodies are concerned.

The SUPPLEMENT, scheduled for the end of June, cannot now appear to time, and we very much regret the inconvenience thereby caused to members of the B.V.A. For purposes of the Council meeting in July, *Council members only* will receive duplicated copies of the Minutes of the meeting held in Edinburgh on April 10th. All other members of the Association will receive a printed Supplement as soon as the industry returns to normal working.

Scientific and clinical papers should continue to be sent to the Editor, since, by the time they have been read and prepared for press the present difficulties may be well on the way to resolution.

REPORT FOR 1957-8 OF THE AGRICULTURAL RESEARCH COUNCIL

This is the second annual report of the Agricultural Research Council to be presented to Parliament under the Agricultural Research Act, 1956. It deals with the work of the Council during the year ended March 31st, 1958, and takes very much the form of last year's report except that it includes, for the first time, a series of articles covering some of the many aspects of agricultural research. It is hoped that these articles will be of interest to the farming community and to the general public alike, and it has been decided to republish them later as a separate booklet.

The report is divided into 3 main parts. The first relates to the activities of the Council itself, and the second comprises the special articles referred to above. Part three consists of a series of brief reports, arranged under subjects, from the agricultural research institutes and units for whose scientific programmes the Council is responsible.

With effect from July 1st, 1959, the Council will assume responsibility for food research and will take over from the Department of Scientific and Industrial Research 3 of the institutes working on this subject. These are the Pest Infestation Laboratory, Slough; the Low Temperature Research Station, Cambridge; and the Ditton Laboratory, near Maidstone.

Since the Council assumed responsibility for Farm Building Research late in 1956, a careful study has been carried out of available information in order to decide the most pressing needs of agriculture. A special unit has been formed and is located at the National Institute of Agricultural Engineering. This unit has carried out an exhaustive examination of literature dealing specifically with farm buildings and is at present conducting a survey of farm buildings in relation to the needs they serve.

The Council is charged with the responsibility for monitoring radioactive fall-out in soil, herbage, farm animals, milk, and other foodstuffs. To deal with this vital work a Radiobiological Laboratory was set up at Wantage and began active work in January, 1958.

Financing Research in the Universities

During the year the Council gave consideration to the problem of financing research in the Universities. It has become increasingly obvious that many science departments in the Universities have insufficient funds available to meet the basic research needs of the teaching staffs. In particular, the Council was concerned about those, such as the veterinary departments, where there were heavy demands resulting from the cost of keeping farm animals. The Council has always regarded its own funds for University research as being available to help promising investigations over short terms by the provision of assistants, either scientific or technical, special apparatus, and materials. Requests were, however, being received in increasing numbers for long-term support for the normal research activities of University departments. It was clear that if the Council met these its funds would be permanently committed and when any new and promising development occurred it would be unable to help. The Council was therefore very pleased at the request of the Advisory Council on Scientific Policy, to join with the other Research Councils, the Royal Society and the University Grants Committee in discussions on the financing of University research. As a result of the recommendations made, the Council is hoping in the financial year 1959/60 to meet at least some of the special requirements of rapidly expanding University departments. Further discussions will be necessary and are to take place before a fully effective scheme can be evolved.

Veterinary Therapeutic Testing Scheme

The Council decided in May, 1957, to set up a Veterinary Therapeutic Testing Board similar in function to that of the Medical Research Council for testing drugs for use in human medicine. There has been a very disappointing response. At the time the Board was set up evidence was presented that there was a real need for such a body with the power

to carry out tests. In spite of the wide publicity given to these arrangements there have been very few applications for the Board to consider and none which seemed to be worthy of a full scale examination.

UNIVERSITY NEWS

London

The London Trophy is awarded annually in a competition organised by the London Riding Clubs' Liaison Committee. The final of this year's competition was held at the Ruislip Riding School on June 7th. The three finalists were the British Broadcasting Corporation, the Challoner Club, and the Royal Veterinary College. To arrive in the final the R.V.C. had beaten the Iraq Petroleum Co., the General Electric Co., and Stanmore District Riding Club.

The competition, in 4 phases, was judged by Mrs. Dorothy Johnson, and the trophy and rosettes were presented by Mr. Michael Simmons, M.R.C.V.S. The result of the competition was:—

1st, The Royal Veterinary College; 2nd, The British Broadcasting Corporation; and 3rd, The Challoner Club.

This was the second year the R.V.C. has entered the competition. The team consisted of Mr. G. A. Cullen, Miss Jean Heron, Miss Jill Thompson, and Mr. C. C. Lorenzen.

Edinburgh

The undermentioned candidate has passed the Part I Examination for the Diploma in Tropical Veterinary Medicine (D.T.V.M. Univ. Edin.): Tripathy, Gulab Dutt, B.V.SC. & A.H. (AGRA), M.R.C.V.S.

THE HAMPSHIRE CATTLE BREEDERS' SOCIETY

In its annual report for 1958 the Society states that it enjoyed another record year—the number of paid inseminations performed was 65,039. The Committee has continued to give close attention to the artificial insemination of pigs, in which the Society leads the country. They were pleased to note the support that the Pig Industry Development Authority proposed to give to pig A.I. projects.

65,039 first inseminations were performed, an increase of 5,463 (9.2 per cent.) on the previous year. The overall conception rate for the year was 66.7 per cent., a slight improvement on the previous year brought about by the improvement in results with deep-frozen semen. The conception rate on 5,202 first inseminations with deep-freeze semen from the Society's bulls was 64 per cent. (62 per cent. in 1957). 1,466 first inseminations were carried out with deep-freeze semen from bulls standing at other A.I. Centres at a conception rate of 58 per cent. The conception rate on 58,371 first inseminations using fresh semen was 67 per cent.

Pigs

Although the third year of the experimental pig service did not show the improvement in farrowing rate that had been hoped for, the results have been successful in that they have clearly indicated the methods to be employed in providing a satisfactory service. There was a small increase in the numbers of sows and gilts inseminated while the overall farrowing rate was 45 per cent. for sows and 34 per cent. for gilts.

The Society's veterinary surgeon, Mr. D. H. L. Madden, devoted a great deal of time to the study of the technical and practical problems involved as well as to the investigation and analysis of the statistical data so far obtained. This analysis formed the basis of a paper presented by Mr. Madden to a Pig A.I. Conference called by the European Association for Animal Production at Paris this year.

TORRINGTON CATTLE BREEDING CENTRE

At the annual meeting of the Torrington Cattle Breeding Centre, a report presented by the advisory committee showed that of 68,313 inseminations carried out during the past year, almost 50 per cent. were from bulls of the North Devon breed. Friesians led the dairy breeds with 26.4 per cent.—an increase of 2 per cent.

Conception rates for 1958 were: Torrington, 67.3 per cent.; Barnstaple, 65.4 per cent.; Holsworthy, 66.7 per cent.; Lapford, 66 per cent.

THE FITZWYGRAM, WILLIAMS, WALLEY AND LAWSON PRIZES—1959 GRADUATES

The Prize Board gives notice that the subject selected for the essay competition—open to candidates who obtain a registrable qualification in the calendar year 1959—is "Review of the Problem of Strongylosis in the Horse, Ox, Sheep, and Pig."

Intending candidates are referred to the regulations for the prizes on pages 531 and 532 of the Register of Veterinary Surgeons for 1958, and any further information may be obtained from the Registrar of the R.C.V.S.

At a meeting of the Council of the Royal College on June 12th, 1958, it was resolved that in the case of those persons who passed their examinations in December or in earlier months, but who were not formally admitted to their degrees until January or later months, they should be regarded as candidates for the prizes which fell within the year in which they passed their final examinations.

THE REGISTER OF VETERINARY SURGEONS

The name of Miss Ann Agnes Currier, D.V.M. (TORONTO), c/o Canada House, Trafalgar Square, London, S.W.1, was entered on the Commonwealth List of the Register on June 10th, 1959.

THE BIRTHDAY HONOURS

Members of the profession, and others associated with it, have been honoured by the Queen in the current List. Everyone will wish to congratulate Mr. H. Sumner, past President and now hon. Treasurer of the R.C.V.S. on the award of the C.B.E.; and also Mr. H. L. McConnell, lately Chief Veterinary Officer, Ministry of Agriculture of Northern Ireland, who receives the Imperial Service Order.

Dr. Ruth Allcroft, senior research officer at the Ministry's Weybridge laboratories, has been awarded the O.B.E., as has also Mr. D. A. Lawrence, formerly director of veterinary services, Rhodesia and Nyasaland.

Lord St. Aldwyn, a former Parliamentary Secretary to the Ministry, becomes a Privy Councillor, and Mr. A. J. D. Winnifrith, permanent secretary to the Ministry, is created K.C.B.; Mr. J. A. Sutherland, under-secretary to the Ministry, receives the C.B., and the Director of the Hannah Dairy Research Institute, Dr. J. A. B. Smith, receives the C.B.E.

FOWL PEST

The Fowl Pest (Mid-Essex Infected Area) Order, 1959, was altered as from June 12th by substituting the Schedule below:—

The county borough of Southend-on-Sea.

In the County of Essex

The boroughs of Chelmsford and Maldon. The petty sessional divisions of Chelmsford, Dengie and Maldon, Brentwood, Billericay, Orsett and Rochford.

In the Petty Sessional Division of Freshwell and South Hinckford. The parishes of Felsted, Black Notley, Rayne, Braintree and Bocking, Bradwell, Stisted, Panfield, Great Saling, Shalford and Wethersfield.

In the Petty Sessional Division of Witham. The parishes of Cressing, White Notley, Fairstead, Faulkbourne, Witham, Terling, Hatfield Peverel, Wickham Bishops and Ulting.

PERSONAL

Mr. J. W. Barber-Lomax has been appointed manager of the Professional Services department of the Wellcome Foundation Ltd. Mr. Barber-Lomax was formerly veterinary information officer.

Engagement

PRIOR—HOLME.—Michael Prior, B.V.SC., M.R.C.V.S., of Gloucester, to Muriel Holme, B.SC. (DOM. SC.), of Long Eaton, Nottingham.

Birth

LLEWELLYN.—At 101a, Lincoln Road, Peterborough, on May 9th, 1959, to Christina (*née* Jeffreys), wife of Geoffrey Llewellyn, B.V.SC., M.R.C.V.S., a daughter, Michèle Christina.

FORTHCOMING I.V.S.U. CONGRESS

The next I.V.S.U. Congress will take place this year in Münich from July 31st to August 8th. The Association of Veterinary Students will be represented by 10 delegates including the President, and also travelling in the party will be the President of the I.V.S.U., Mr. A. O. Mathieson (Edinburgh.).

R.C.V.S. OBITUARY

We record with regret the death of the following member of the profession:—

WALKER, William Herbert, D.S.O., O.B.E., of "Corner Cottage," Sutton, Abinger, Nr. Dorking, Surrey. Graduated London, December 16th, 1903; died June 14th, 1959. The cremation took place at St. John's, Woking, on Thursday, June 18th.

R.C.V.S. TRUST FELLOWSHIPS AND SCHOLARSHIPS

The Council of the Royal College of Veterinary Surgeons Trust announce the setting up of the following Fellowships and Scholarships of the Trust.

1. The B.O.C.M. Fellowship for research in the field of Animal Husbandry, Hygiene and Disease Control in Farm Livestock. Value £1,000 p.a.

2. The Boots Research Scholarship in Veterinary Clinical Medicine. Value £750 p.a.

3. The PIDA Fellowship for research in Pig Health. Value £1,500 p.a. plus additional expenditure grant up to a maximum of £1,000 p.a.

Further details from the Secretary, R.C.V.S. Trust, 9 Red Lion Square, W.C.1. Closing date for the receipt of applications August 10th, 1959.

COMING EVENTS

June

24th (Wed.). Meeting of the Supplementary Veterinary Register Division at 7, Mansfield Street, Portland Place, London, W.1, 2.30 p.m.

Annual General Meeting of the Lincolnshire and District Division at the George Hotel, Grantham, 2.15 p.m.

27th (Sat.). Meeting of the B.S.A.V.A. North West Region at the Brocket Arms, Wigan, 8.15 p.m. Dinner at 7 p.m.

30th (Tues). Summer Meeting of the A.V.T. & R.W.s (Northern Region) at Aberystwyth, 11.30 a.m.

July

1st (Wed.). Meeting of the B.V.A. Overseas Committee at 7, Mansfield Street, London, N.W.1, 2 p.m.

8th (Wed.). Summer Meeting of the Lancashire Veterinary Association at Nantwich, 2.30 p.m. Reception and dinner at the Swan Hotel, Tarporley, 6.30 p.m. for 7 p.m.

10th (Fri.). General Meeting of the Society of Practising Veterinary Surgeons at The Victoria (late Dolwar) Hotel and Restaurant, Carmarthen, 2.30 p.m.

August

30th to 5th September. 77th Annual Congress of the British Veterinary Association in Folkestone. (Official opening Monday, August 31st.)

B.V.A. COMMITTEE AND COUNCIL MEETINGS IN LONDON

Tuesday, July 14th—at 7, Mansfield Street, W.1.

4.30 p.m. Finance Sub-committee.

Wednesday, July 15th—at 7, Mansfield Street, W.1.

10.00 a.m. Veterinary State Medicine Committee.
11.30 a.m. Home Appointments Committee.
2.15 p.m. Small Animals Committee.

Thursday, July 16th—at 7, Mansfield Street, W.1.

10.00 a.m. Parliamentary and Public Relations Committee.
12 noon Farm Livestock Committee.
2.15 p.m. General Purposes and Finance Committee.

Friday, July 17th—at Connaught Rooms, Great Queen Street, W.C.2.

10.15 a.m. Council Meeting.

Letters to the Editor

The views expressed in letters addressed to the Editor represent the personal opinions of the writer only and their publication does not imply endorsement by the B.V.A.

Game Eradication

Sir,—I should be glad if you would permit me to reply to Dr. A. M. Harthoorn's letter on the subject of game eradication which appeared in your issue of March 21, 1959. I write as a protagonist of game preservation wherever practicable, and would mention that I am a Trustee of the Uganda National Parks and a member of the Uganda Wild-life Committee as well as responsible to the Uganda Government for the orderly development of Uganda's livestock industry.

It would appear that Dr. Harthoorn has permitted his very understandable enthusiasm for fauna preservation and economic game management to influence his judgment and a number of loose and misleading statements are apparent in his reasoning.

In his third paragraph, Dr. Harthoorn makes the following two statements which are presumably intended to be read together: "Bush clearing has failed to eliminate tsetse flies in certain areas but so has the slaughter policy failed to prevent the spread of fly to Masaka where its presence is now officially admitted," and "the total number of game killed in this area of Uganda is some 50,000 animals over the last dozen years." The truth of the matter is that *G. morsitans* had spread into Masaka District before July 1st, 1958 and that no animals had been killed in this area until after that date.

Up to 1958 in other parts of Uganda a total of 58,320 animals had been killed in tsetse control operations since 1945, and as a direct result 6,025 square miles of land had been reclaimed from tsetse. Much of this country has now been reoccupied by graziers and their cattle; in the northern areas of Buganda some 75,000 cattle are now held in country previously denied to stock owing to the presence of tsetse and in Bunyoro eradication of fly by game exclusion has resulted in the opening of large areas of pastoral country and the development of the Bunyoro Ranching Scheme by the Uganda Development Corporation in partnership with the Bunyoro Native Government.

Dr. Harthoorn rightly states that the Department of Tsetse Control has reclaimed 1700 square miles of land in northern Karamoja by selective bush clearing, and again rightly implies that this method is preferable to game elimination. He neglects, however, to point out that attempts to eliminate tsetse by bush clearing in one form or another have been undertaken in Ankole since about 1931 and that, due to differences in ecological and climatic conditions, these have failed either to reclaim the country or to prevent further tsetse advances. The last major clearing scheme in Ankole was started in 1952 under the control of the East African Trypanosomiasis Research Organisation and continued until 1958. Only when it was seen to have failed to hold the tsetse after six years of effort, at a cost of not less than £140,000, was clearing abandoned in favour of game elimination. Even then, game elimination was agreed to only in part of the area while investigations into other methods of reclamation, including bush clearing and ground spraying of insecticides, continue elsewhere.

Most of the methods of tsetse control referred to by Dr. Harthoorn are at present inapplicable either to large tsetse belts or to the species concerned (*G. morsitans*). The decision to adopt the method of tsetse control by game exclusion was reached by the Minister of Natural Resources on the advice of a technical committee, of which the Game Warden is a member, and which is fully aware of the value of game animals and deplores the necessity of their destruction, even in so good a cause. Dr. Harthoorn's assertion that this method was agreed to principally on the grounds of cheapness is incorrect; it was considered to be the only method likely to attain the results that clearing had failed to obtain in an area covering some 1,500 square miles of pastoral country.

As Dr. Harthoorn states, the chemo-therapy of trypanosomiasis has made great strides in recent years; field trials in Uganda, however, indicate that we have a long way to go before it will be possible "to send cattle into infested areas under drug 'umbrellas' using compounds such as prothidium, which last for some five months and under some conditions considerably longer." Many factors are involved, not least of which are the degree of "challenge" and the sensitivity of trypanosomes to drugs currently in use. In a recent field trial in an area of medium tsetse infestation in Ankole District, seven out of twelve cattle were confirmed positive to *T. vivax* between thirty-one and forty days after treatment with prothidium at 2 m/mgs. per kilo; two animals continued negative for one hundred and twelve and one hundred and fifty-three days respectively. It is possible that resistant strains of trypanosomes are being transmitted by fly in the area but it has not been possible to demonstrate this.

It may interest Dr. Harthoorn to know that some fifteen thousand cattle are being maintained under the protection of Antrycide pro-salt in the fly areas of Ankole. To inoculate at two-monthly intervals this number of animals, widely dispersed in extensive pastoral country, is an administrative problem of no small magnitude. In addition, difficulties are being experienced in enforcing the regular two-monthly treatments of Antrycide pro-salt as stock-owners are

reluctant to meet the cost and cattle are frequently withheld from treatment with the mistaken idea of saving a few shillings. A difficult situation has now arisen with stock-owners in some cases reluctant to leave their grazing areas which are becoming infested with tsetse and yet refusing to meet the cost of adequate protection for their cattle.

I hope that I have written enough to indicate some of the problems which Dr. Harthoorn dismisses so lightly. All of us working in this most difficult field of tsetse and trypanosomiasis control consider that the method of tsetse eradication by game exclusion is thoroughly abhorrent and that it should only be undertaken following the most careful investigation, and as a last resort; nevertheless, under certain circumstances and in the light of our present knowledge, use of this method is unavoidable if the health of both the human and cattle population is to be safe-guarded.

Yours faithfully,
J. B. RANDALL.

Director of Veterinary Services and Animal Industry
P.O. Box 141,
Kampala,
Uganda.

June 5th, 1959.

The R.C.V.S. Council Election

Sir,—I should like to thank the Fellows and members of the Royal College of Veterinary Surgeons who voted for me in the Council election, and to say that I shall do my best to merit their confidence.

Yours faithfully,
H. G. LAMONT.

Veterinary Research Division,
The Farm,
Stormont,
Belfast.

June 8th, 1959.

Sir,—May I, through the courtesy of your columns, thank all those who voted for me at the recent R.C.V.S. Council election, and also congratulate the successful candidates.

Yours faithfully,
MICHAEL YOUNG.

43, The Mall,
Ealing,
London, W.5.

June 9th, 1959.

A Report of Disciplinary Proceedings

Sir,—I have just read the SUPPLEMENT to THE VETERINARY RECORD, and the report on my "case" before the disciplinary committee of the Royal College omits several important facts which I feel very strongly should be recorded. There are also two errors in the report.

Three hundred copies (not five hundred) of the article were sent to the British Cattle Breeders' Club, but they were sent only *at the request* of the chairman of that Club.

I did not *withdraw* from the meeting after giving my evidence. The witnesses named all gave evidence *on my behalf*; they were: Mr. A. L. L. McKerrell, M.R.C.V.S., Dr. J. S. A. Spreull, PH.D., M.R.C.V.S., Mr. A. H. Robb, M.R.C.V.S., Major C. Wheaton-Smith, Mr. W. Snelson, and Mr. J. T. Stanford.

The chairman did not complete the final paragraph recorded in the SUPPLEMENT. Mr. Percy Lamb, Q.C., interrupted him and pointed out that since neither of the charges had been proved the case was dismissed. The chairman agreed. Mr. Lamb also suggested to the chairman that anything he had to say to me was purely in the nature of friendly advice—one veterinary surgeon to another—and again the chairman agreed, whereupon the meeting broke up without the complete advice being spoken.

In the interests of all members, not only of myself, these cases should be reported correctly or not at all.

Yours faithfully,
E. C. STRAITON.

132, Lichfield Road,
Stafford.

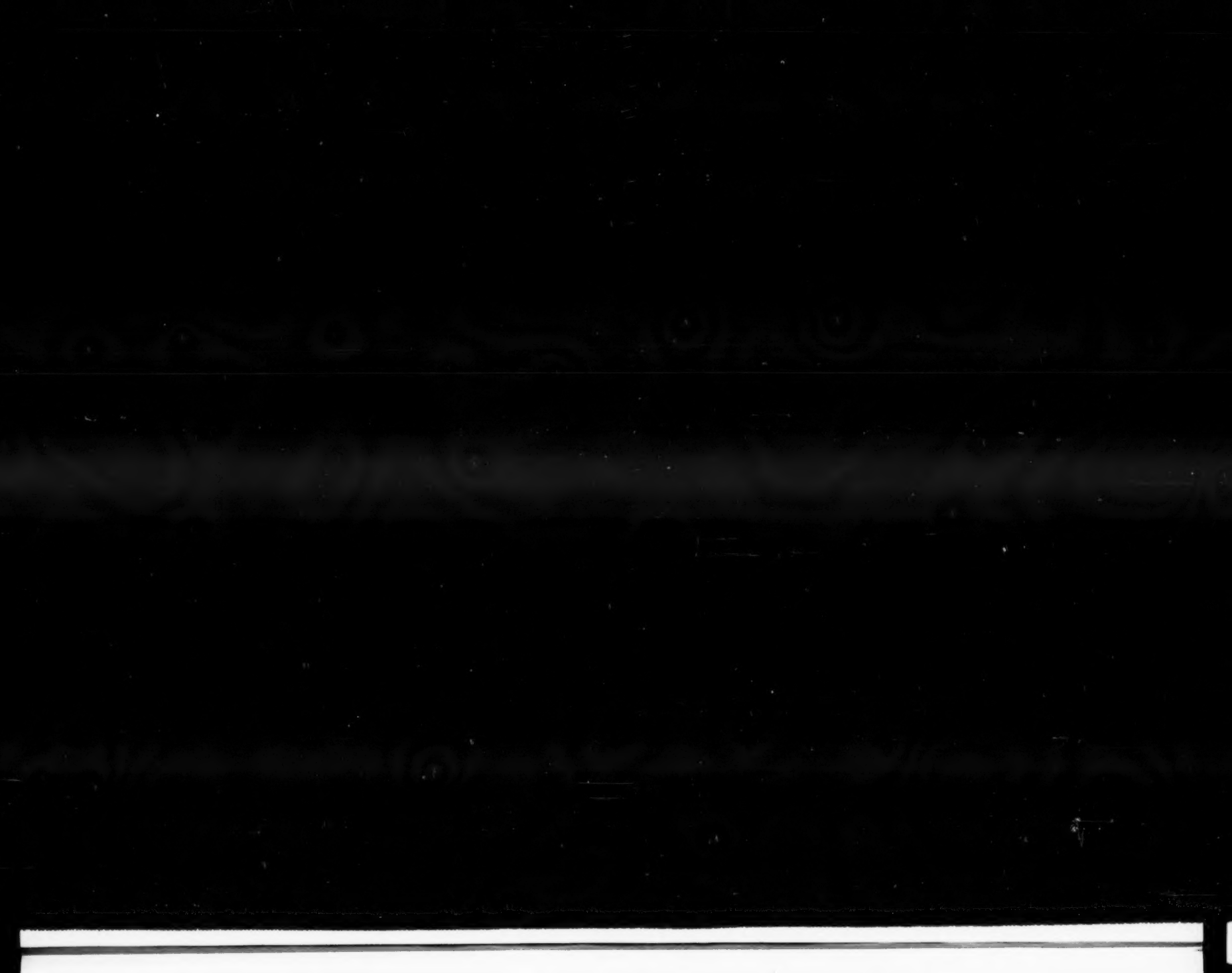
March 27th, 1959.

Sir,—During the past two months I have been ill and then out of the country, and have only just returned. On reading through the SUPPLEMENT I find a report regarding Mr. Edward C. Straiton who appeared before the disciplinary committee of the Royal College on July 24th, 1958. I am astonished to read what has been published on the committee's findings, from which it would appear that a "not proven" verdict had been arrived at. This verdict, I understand, is entirely a Scottish verdict and not admissible in England.

No doubt those who were present will remember, and the notes taken at the time will show, that after the chairman made this statement Mr. Straiton's counsel rose and asked the chairman if he was to take it that the two charges had been dismissed. To this the chairman answered in the affirmative. I think, in all fairness to Mr. Straiton, this part of the proceedings which, in my opinion, is the most important, should be published. In the charges made against Mr. Straiton there was no question raised regarding contents or tenor of the articles. Consequently I consider that the chairman's remarks regarding tenor are quite irrelevant.

Yours faithfully,
A. H. F. ROBB.

16, Ward Street,
Glasgow.

April 16th, 1959.

[These two letters were to have been printed in the SUPPLEMENT; but owing to the current printing dispute which will delay publication, it seemed proper to provide space in this issue of THE VETERINARY RECORD.—*Editor.*]